

cool room and the others was most astonishing. He agreed with what Professor Robertson said, and hoped such improvements would be made that all cheese would be cured without being heated. Mr. Ballantyne states, and the "Farmer's Advocate" agrees with him, that the sooner factorymen fit up their curing rooms so as to control temperature, the better for the industry.

Mr. I. W. Steinhoff said he also had examined the cheese. He endorsed the opinions of others as to the marked superiority of the cool-cured cheese. In the Julys, he put the difference at fully one and a half cents per pound.

Mr. R. A. Simister believed the object lesson in the proper curing of cheese at a low temperature, in branding and in handling the cheese had been the greatest advance he had known in the cheese trade for twenty years, and he said the Department of Agriculture deserved the greatest possible credit for what had been done.

The Department of Agriculture, at Ottawa, will publish, during the fall and winter months, full information regarding the methods to be followed in improving curing rooms at all cheese factories, prepared under the supervision of Mr. J. A. Ruddick, Chief of the Dairy Division, who had the direct oversight of the Government illustration curing rooms during the past summer.

## APIARY.

### Bees in Manitoba.

#### THE CELLAR.

In preparing the bee cellar for winter, several essential things should be observed. It should be so constructed as to be unaffected by the changes of temperature taking place outside. A temperature as nearly even as possible and eight to twelve degrees above freezing is most desirable. Bees will winter in a lower temperature, but men of experience generally quote this as being about right. Then it should have sufficient ventilation. This is most important. Much has been written about the danger of dampness in the cellar, but the consensus of opinion among beekeepers seems to be that with the temperature right and a free circulation of air, dampness is not a source of danger at all. Indeed, a certain degree of moisture is claimed to be necessary to the bees, and men whose experience entitles their opinions to the greatest respect take measures to supply this moisture when it is not naturally present.

In placing the bees in the cellar certain precautions should be observed. Never set the hives on the floor nor against the wall, especially if the latter be of stone, and if the hives are placed on shelves, don't let these be in any way connected with the floor above, if under a dwelling house, as the constant jarring from above would disturb the bees and disaster would be the result. The best plan is to provide benches sixteen inches high on which to set the first row of hives. If the hives used have the frames running from front to back, as in the Langstroth, the back can with benefit be raised an inch or more higher than the front. This assists ventilation, and makes it easy for the bees to remove the dead. This can't be done, however, with the Jones, or any hive having the frames hung crosswise. Remove the cover and propolis cloth, and place across the combs two or three small slats three-eighths of an inch thick. These should be short enough that the ends will not touch the sides of the hives, as they are only to raise the covering cloth from the combs so that the bees may pass freely from one to another. Over these lay a woolen cloth, one or more folds, and large enough to hang over a little on all sides. This is all the cover required. When one row is complete, lay across each hive (over the cloth) two slats of inch board a little longer than the hive is wide, and on these place the next row of hives.

A diagram of the apiary should be made, and the position of each hive numbered. The corresponding number should be placed on the hives, so that each may be returned to its own place in the spring. This is desirable, as it not only prevents the bees mixing and losing their own hives when first set out, but it enables the beekeeper to go on then with all the knowledge of the several colonies that the past season's experience has given him.

It is well worth the trouble, too, to weigh every hive in and weigh them out again in the spring. By doing this and placing the full weight on each one knows the condition of his hives without opening them when taking them out—a thing not always practicable in the spring.

Red River Valley.

J. J. GUNN.

### Yellow Clover.

I am sending you a weed which I found by the public highway. Please let me know, through the columns of the "Farmer's Advocate," its name, and whether it is a bad one or not?

Hastings Co.

PETER M. STEWART.

Ans.—The plant is yellow or hop clover (*Trifolium agrarium*). It is not likely to prove troublesome in cultivated fields, being closely allied to Alsike and common white varieties.

## POULTRY.

### An Ode to the Hen.

Poets in all lands and ages  
That the thought of man engages,  
Since the early days of Homer and a thousand  
years before,  
Have delighted oft in springing,  
Odes on birds that do the singing,  
Birds that sail the briny ocean or that roost  
along the shore.

I have read since early childhood  
Of the birds that haunt the wildwood,  
And I've heard their mellow voices when the  
earth by spring is warned;  
But no music I can tackle  
Is so pleasing as the cackle  
Of the barnyard hen whose duty has been patiently  
performed.

To become a great musician  
Is no barnyard beauty's mission,  
As with fortitude becoming to her daily task she  
pegs;  
Hers to cackle when she's able  
And supply the Christian's table  
With the tempting fries in autumn and the early  
scrambled eggs.

There is dignity of bearing  
When she goes out for an airing,  
Where the early melons nestle among vines that  
seem to squirm;  
When she hies with self-reliance,  
Bidding all the world defiance,  
To the garden in the morning to procure the  
early worm.

Much I love the wild bird's matin  
And its plumage soft as satin,  
And the meadow larks and robins are to me a  
keen delight;  
And I used to lie enraptured,  
With my senses fairly captured,  
When the whip-poor-wills were singing in the  
middle of the night.

How the song birds in the wildwood  
Now remind me of my childhood,  
And, as idle years affect me do I love them more  
and more!  
I delight to see and hear them,  
And am happiest when near them,  
But the home-grown hen of commerce is the bird  
that I adore.

—A. L. Bixby, in N. Y. Farmer.

### Shrunken Wheat Better Hen Food than No. 1 Hard.

The question as to which is better food for laying hens, shrunken or plump wheat, is one which has been agitating a number of poultrymen in this State, and to intelligently answer it, two samples of wheat received from Mr. MacFarlane, of Hanford, have been analyzed, with the following results:

|                                             | No. 138.<br>"Shrunken" | No. 139.<br>"Plump." |
|---------------------------------------------|------------------------|----------------------|
| Moisture .....                              | 8.30%                  | 9.80%                |
| Ash .....                                   | 2.34                   | 2.00                 |
| Protein .....                               | 17.10                  | 11.70                |
| Fiber .....                                 | 3.48                   | 2.05                 |
| Starch, etc. ....                           | 66.78                  | 72.65                |
| Fat .....                                   | 2.00                   | 1.80                 |
| Total .....                                 | 100.00                 | 100.00               |
| Fuel value in one<br>pound (calories) ..... | 1709                   | 1683                 |

Poultry rations are usually too carbonaceous; that is, they contain too much starchy matter, and not enough of the albuminoids so necessary for egg production. Consequently, the richer a food is in albuminoids, the more valuable it is to the poultry feeder.

An examination of the above table shows two main differences in the results. In the plump wheat, the percentage of starch, etc., is considerably higher than the corresponding figure for the shrunken wheat; while the reverse is noted for the rating of protein, that of the latter sample being almost 50 per cent. greater than that yielded by the former, as is seen by the figures 17.10 and 11.70 per cent. respectively. This fact alone is sufficient to warrant a feeder purchasing shrunken in place of plump wheat as a food for laying hens.

It is barely possible that the digestion coefficient for protein in the shrunken wheat may not be as high as that for the plump, but this question we will settle at the earliest opportunity by a digestion experiment with our hens. It must not be forgotten, however, that the figure 11.70 for albuminoids in the plump wheat is a trifle below the average; and while another examination of two similar wheats would, in all probability, show the shrunken sample richer in nitrogen, there might not be such a marked difference as we have between the two lots under discussion.—University of California Experiment Station Bulletin."

### Poultry Yard Notes.

The nights are now chilly, and the change will likely cause sickness among the poultry, unless special attention has been paid the yards and houses.

First, the yard should be graded so that during the rainy season no water will stand on the ground.

A few loads of cinders or gravel will cost but little, and will prevent mud and filth from accumulating.

The house should be gone over and all the leaks and cracks closed, and the scratching pen should be cleaned and a fresh supply of straw put in.

When the leaves begin to fall, they can be gathered at a small cost, and when stored in a dry place make a splendid litter during the winter.

Oats and millet are also good, and the fowls will keep busy turning over the straw looking for the grain.

One way of destroying a hen's digestion and inviting disease is to keep on feeding soft food exclusively.

In the breeding pens from which the eggs are to be used for hatching have for the larger breeds, one cock to seven hens, and the smaller breeds, one to nine or ten, for the best results.

It pays to bake food for young chicks. Take equal parts of coarse corn-meal, wheat bran and a handful of meat or meal or ground scraps to a quart of the mixture and bake like a shortcake, using baking soda to lighten it, and enough wholesome fat to shorten it so it can be easily crumbled. If well baked it will keep a long while. —Orff's Poultry Review.

### Spare the Pullets.

When filling the fattening crates or pens with chickens, spare all the best pullets. They are certain to be needed this winter and the following summer in the production of eggs to supply the ever-growing demand. There is a strong tendency with many to close up all the birds of the correct weight when preparing a lot for market. The result of this is already apparent in a scarcity of eggs, and next season it will doubtless be greater. On the other hand, it will be necessary to get rid of all the old hens. Any that have passed their second year should be introduced to a fattening ration and forthwith despatched. As egg producers, after that age, they are invariably fed at a loss. An exception, however, may be made in the case of pure-bred stock which is kept for breeding purposes, and where it is desired to perpetuate the blood of birds of good quality.

## GARDEN AND ORCHARD.

### The Management of Raspberries and Blackberries.

The Maine Experiment Station makes the following suggestion as to the time for pruning and transplanting raspberries and blackberries:

"The ideal treatment for raspberries and blackberries is to pinch them back at intervals during the summer and thus secure strong, sturdy bushes, 3½ to 4 feet high, with laterals 1 to 1½ feet long, rather than to practice severe heading back after the plants have become long and 'leggy.' If, however, as is frequently the case even in the best managed gardens, the plants are at this season making vigorous growth which may not mature, they should at once be cut back to the desired height and the canes will harden before cold weather. Many prefer to cut back the bushes in the spring, after the extent of winter-killing is determined. Thinning the canes, which should always be practiced, may be done at any time during the season. In general one-half or more of the young canes which appear should be cut out.

"Blackberry and raspberry bushes may be transplanted this fall if the work is done immediately, but better results are usually obtained from spring planting. Currants, on the other hand, have given rather better results from fall setting."

W. M. M.

### Get Ready.

Whether there is to be a good garden or not on the farm next year will depend very largely upon the treatment which the plot receives this fall. Vegetables of all kinds do best on soil which has been well tilled during the previous autumn. Now is the time to plow down manure so that it may be rotted and the plant food in a condition to be taken up when needed next season. Where the subsoil is hard and impervious, it should be loosened in some way at this period, rather than in the spring, as in the latter case it may not become solid enough to prevent too free leaching of water and subsequent drying out during hot weather. Cultivate, too, to get as many weed seeds as possible germinated, and leave the surface rough and open for the winter so that the largest possible area may be exposed to the mellowing action of frost and sun.